

ABSTRACT

Disclosed is a signal processing method for an FM-CW
radar that can accurately detect the relative distance,
5 relative velocity, etc. with respect to a target
approaching or receding at a high relative velocity,
wherein predicted values for peak frequencies currently
detected in upsweep and downsweep sections are computed
from the previously detected relative distance and
10 relative velocity, and it is determined whether any of
the predicted values exceeds a detection frequency range
and, if there is a peak frequency that exceeds the
detection frequency range, the frequency is folded and
the folded frequency is taken as one of the predicted
15 values, the method then proceeding to search the
currently detected peak frequencies to determine whether
there are upsweep and downsweep peak frequencies
approximately equal to the predicted values and, if such
upsweep and downsweep peak frequency are found, the peak
20 frequency approximately equal to the folded predicted
value is folded and the folded peak frequency is used.